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NOTES ON ARCTIC AND SUB-ARCTIC COLLECTING

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The ensuing remarks are not intended as an all-inclusive coverage of arctic collecting. They relate to certain areas of which the author has some knowledge and offer comments, hopefully useful, to those collectors who might be anticipating a trip to the northlands. Travel to the Far North becomes easier every year, and more and more collectors will be traveling north in search of the "treasures" to be found there.

There are several items which every collector going to the Far North should keep in mind. Of primary importance is seasonal variation. In any given year, the flight period for a species may be quite different from the year before or the year following. Some species appear to be biennial.

Weather conditions are extremely variable from year-to-year, and from day-to-day. Overnight temperature drops of 60°F are not uncommon.

During June and July, the prime collecting months, extended or continuous daylight occurs depending upon latitude. Thus it is useless to take along a light trap for moths during this period, although a trap may be of use in some areas in August.

For personal comfort, protection against biting insects is essential. Some of the best collecting is in muskegs (bogs). Entrance into such areas by any warm-blooded body is an open invitation to a host of mosquitoes and flies. My suggestion for dress is as follows: Mid-calf rubber boots (for both bogs and tundra areas), heavy weight but loose Levis, light shirt under a light weight Nylon windshirt, cap or hat with visor, and an army-style O.D. headnet. The boots will assure dry feet. The loose heavy jeans should frustrate the bugs in any attempt to bite legs. Tuck the jeans inside the boots. For some reason, mosquitoes don't seem to be able to penetrate effectively Nylon cloth, hence the windshirt. Army-style headnets, available from

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surplus outfits, cover head and shoulders and tie under the armpits. This avoids the use of insect repellant. Generally speaking, I have found repellants nearly useless in arctic regions and in comparable areas in the Rocky Mountains. Although smelly, the oldtime Oil of Citronella appears to be more effective than anything else, with Cutters a close second. The latter, however, attacks some plastics and one must use it with caution. Light gloves may be necessary when collecting in deep bogs. Oil of Citronella rubbed on the hands, especially the backs of the hands, will generally suffice for protection against the angry stilettoes.

Clothing should be chosen in anticipation of wet weather and a wide temperature variation. The mean temperature at Churchill, Manitoba in the summer is about 50°F. In McKinley Park, Alaska, I have experienced a temperature drop from nearly 90°F to 30°F over an eight-hour period at the end of June.

Finally, avail yourself of a "native guide" if one exists. Local collectors can indicate very quickly the good and bad spots. Many of the arctic species tend to be quite local in habitat, and frequent areas that one familiar with more southern latitudes would bypass. Collectors with experience in the Rocky Mountains (high-altitude species) are perhaps the best prepared to "smell out" the habitats of the arctic species.

Generally speaking, the arctic mountain passes are at low elevations (between 3000-4000′) with altitude-treeline about 3000′ or less. Above certain latitudes, no trees occur, only scrub. This is true at 58°45′N (sealevel) at Churchill.

Arctic and subarctic collecting can be at the same time, both very rewarding and very frustrating. The reward is in the variety of species that can be found; the frustration is in trying to collect them because of weather conditions. In this paper, some of the prime collecting areas are described along with the problems associated with visiting these spots.

From my experience, albeit somewhat limited, the best seasons for collecting appear to occur in odd-numbered years following a cool and wet year. In central Alaska, many of the desirable species of *Boloria* and *Oeneis* seem to fly only during odd-numbered years, although occasional examples may be taken in even-numbered years. Another feature to recognize is that the daylight hours are different from more southern latitudes. Twenty-four hour daylight or near daylight is the rule in June and July. For this reason, the collecting season begins in mid-June and is virtually over by the end of July in most locali-

ties; a far different situation from the Rocky Mountains, for example, when prime collecting is from mid-July into August.

Weather conditions are of major importance, and at best are unstable and unpredictable. Anyone planning an arctic trip should allow enough time to be in any given collecting area during the better part of the season. It is not unusual for bad weather to continue for a week or more. Thus one should have a month's time, at least, available for arctic trips. Coastal Alaska, especially the southern coast, the Hudson Bay area (Churchill), and northeastern Canada (Mt. Albert, Gaspe, etc.) are subject to stationary low pressure areas during the summer, which may persist for days or weeks. In the Churchill area, when the ice breaks up on Hudson Bay at the end of June or in early July, cold weather (in the 30's), fog, and drizzle are the rule. These conditions may persist for three days to a week with no collecting possible. By contrast, interior Alaska, north of Fairbanks and south of the Brooks Range can be hot and clear (temperatures in the 90's) at the same time of year. South of Fairbanks (McKinley Park, etc.), coastal conditions prevail.

Alaska:

Alaska is accessible by car, boat, and air. For one who has the time, it is well worth the extra days of travel to drive the Alaska Highway. Weather permitting, there is good collecting starting north of Edmonton, Alberta (Hwy. 43). The Alaska Highway proper begins at Dawson Creek, B.C. The first 88 miles are paved. The section through British Columbia and the Yukon Territory to the Alaska border is very well maintained gravel. The last leg of the highway from the border to Fairbanks is paved. Since the major portion of the road is gravel, one should take some necessary precautions. These include extra spare tires, beyond the usual spare, plastic headlight protectors, a 1/4" hardware cloth or other screen across the front of the car to deflect stones, chassis undercoating, and a pad over the fuel tank, for rear-mounted tanks, to prevent stone punctures. A tool kit and spare parts should be carried, as although there are gas pumps every 50-100 miles, repair service is hard to find and expensive. Because of the fine dust, a heavy-duty air cleaner is strongly recommended. Other than dust and possible fiying stones, when passing or being passed, the only other hazards are occasional washouts after heavy rains. These are usually repaired within 24 hours and generally present little problem for passenger cars, but may cause difficulty for recreational vehicles and cars with trailers. The main washout danger area

appears to be the 300-mile stretch between Dawson Creek and Ft. Nelson, British Columbia. Extra gasoline should be carried, as many of the service stations open late in the morning and close early in the evening, especially on weekends. A VW or similar car is ideal for the trip, although a bit cramped.

Except for Whitehorse, Yukon Territory, accommodations along the highway are minimal. There are a number of turnout areas and several campgrounds, however, and tent or recreational vehicle camping is no problem. One should plan on four nights camping between Dawson Creek and Fairbanks if any amount of collecting is to be done along the way. Members of the American Automobile Assn. should obtain the booklet available on the Alaska Highway, as it contains an excellently detailed map.

The best collecting spots that I found are muskegs, willow bogs, and the emergency air strips. The latter are well-marked clearings just off the road. They are covered by low vegetation and usually present a good supply of wildflowers. One must get out into the centers of the bogs and investigate the little islands of black spruce, for these will yield *Erebia disa* and *Oeneis jutta.* Various species of *Boloria* frequent the willow bogs.

Figure 1 shows the main road and major collecting areas in Alaska, in terms of accessibility. Nome, Anatuvuk Pass in the Brooks Range, and the North Slope are accessible by air via Wien Airlines. One should check at Fairbanks for flight schedules. One of the major areas is Eagle Summit, which is 109 miles north of Fairbanks on the Steese Highway. As of the summer 1971, the first 44 miles of the road were paved with the remainder gravel. The road continues past Eagle Summit to the Yukon River. Some of the species of interest at Eagle Summit and 12 Mile Summit just to the south are: *Oeneis melissa, polixenes, bore, Erebia youngi, magdalena, discoidalis, disa, fasciata, Boloria polaris, titania, chariclea, youngi, freija, frigga, napaea, distincta* (for the lucky), *Papilio machaon, Colias nastes* and *Parnassius eversmanni.* The summit areas are above-treeline tundra. Both north and south of them are below-treeline muskeg areas which should be investigated for *Plebejus optilete, Colias palaeno, Hesperia manitoba, Boloria, Erebia,* and *Oeneis.*

Generally speaking, the major habitats, and this is true of the arctic regions in general, are black spruce muskegs and willow bogs in the Taiga Zone, and the open Tundra Zone. The boreal forests are usually too dense to permit collecting and appear

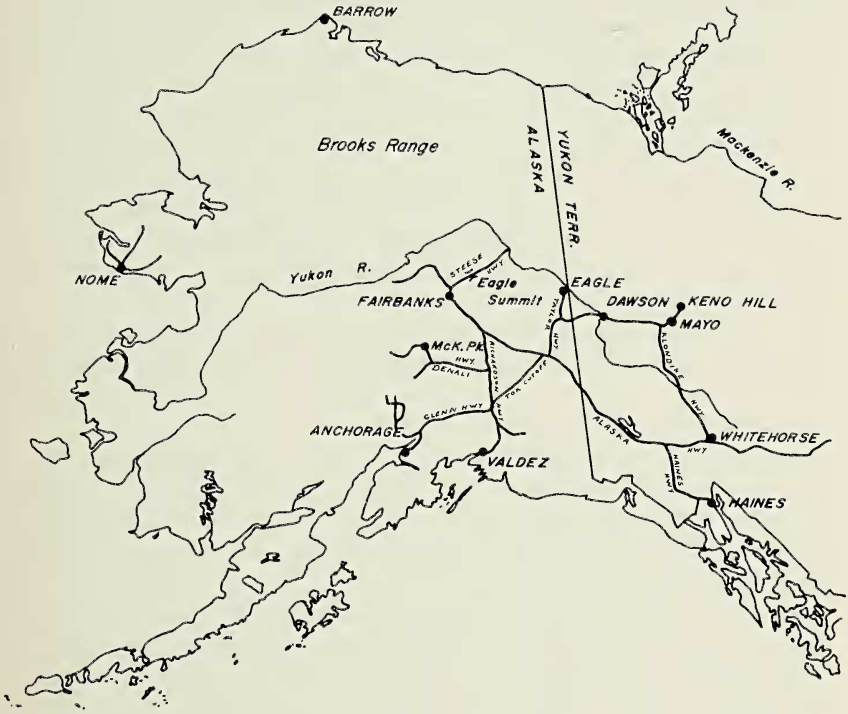

Fig. 1.—Map of Alaska and Yukon Territory. Highways are shown as the thicker solid lines.

to harbor very few species.

South of Fairbanks, the Richardson highway affords good collecting in spots. At Paxson Jct. (mile 185.5), the Denali Highway leads west to McKinley Park, 161 miles away. Although it was being "improved" in 1971, the Denali was an accumulation of chuckholes loosely connected by gravel. I would not recommend travel on it except in a light, but tightly-sprung vehicle. It is by far the worst major road that I have ever driven. Along the highway, one finds *Erebia rossii, Boloria eunomia denali,* and a variety of other species. The Denali Highway in McKinley Park is well-maintained and collecting is excellent, especially in the vicinity of the several Pass areas. Collecting, however, is *by permit only* from the National Park Service. Generally these permits are available only to university or museum personnel engaged in specific studies. Thus unless one wishes to tour the Park, which is quite beautiful and uncluttered, it is not a recommended trip because of the highway and the restricted collecting.

Toward Valdez and Anchorage, some interesting species can be obtained, but collecting is difficult because of adverse weather conditions. Snow at higher elevations (above 2500′) is not unusual in June and July.

I have not found collecting at Haines very productive, although the dark coastal race of *Pieris napi* occurs there as well as *Anthocaris sara alaskensis.* I have collected both species there in early July. The Haines Highway will be covered in the Yukon Territory discussion.

Other areas of interest include spots along the Taylor Highway from the junction with the Alaska Highway to Eagle, Alaska. Charter flights can be arranged into remote locations, although bad weather can sometimes maroon the luckless collector in remote spots for extended periods of time.

Yukon Territory, Northern British Columbia, Alberta, and Northwest Territories:

The most easily accessible collecting in northern Alberta, British Columbia, and the southern Yukon Territory is via the Alaska Highway and Highways 43, 34, and 2 from Edmonton to Dawson Creek, via Whitecourt, Alberta. An alternative route to Alaska is from Prince George to Prince Rupert, British Columbia. There are a number of spots along Highway 16 that will yield interesting species. At Prince Rupert, one enters the "Alaska Marine Highway.' This is the ferry system which oper-

ates between Prince Rupert, B.C. and Skagway, Alaska, with stops at Ketchikan, Wrangell, Petersburg, Juneau, and Haines. The trip is quite scenic and takes about 36 hours. It is fairly expensive. The cost from Prince Rupert to Haines for two people and a small car is in excess of $200, excluding meals. Ferry transport is also available from Seattle and Vancouver to Anchorage and other ports, at additional expense.

At Haines, Alaska, one enters the Haines Highway, which is approximately 160 miles long. The initial portion in the Alaska panhandle is paved. The remainder through a small corner of B.C. and the Yukon Territory is well-maintained gravel. The road joins the Alaska Highway at Haines Junction, Y.T. Entering the main portion of Alaska by this route eliminates over 900 miles of gravel-road driving on the Alaska Highway. The best collecting appears to be in the area between Kathleen Lake, Y.T. (mile 142) and Haines Jct., Y.T. (mile 159). Such species as *Oeneis bore, Euphydryas anicia helvia, Erebia epipsodea remingtoni, C. tullia* ssp., *Colias philodice vitabunda,* and *Parnassius phoebus* ssp. can be taken. Chilkat Pass, B.C. at mile 65.3, although appearing to be good habitat, I found completely devoid of butterflies.

Additional areas in the Yukon Territory are served by the Klondike Highway, which leaves the Alaska Highway just west of Whitehorse, Y.T. and meanders northwest to Dawson, and then west to Chicken where it joins the Taylor Highway to Eagle, Alaska. A spur goes to Mayo Lake and Keno Hill. Other areas can be reached by Charter flight. Essentially all areas in the Northwest Territories must be reached by air. The Mackenzie Highway from Peace River, Alberta does serve a few areas in the southern portion of the N.W.T. including Dawson Landing and Fort Providence on Great Slave Lake, Fort Simpson on the Mackenzie River (by a spur route), and Yellowknife, also on Great Slave Lake (north shore).

Two primary collecting areas are the Richardson Mountains in the western section of the N.W.T. and Baker Lake in the eastern section. A highway has been proposed that will skirt the Richardson Mts. allowing access to that area by car. Baker Lake, reached by air, is a choice spot in that *Colias boothi* is taken there, as well as a number of other species.

The Pas-Churchill, Manitoba:

In addition to his own experiences, the author has drawn on the papers by the Chermocks (1968) and Masters (1971) in

preparing this section. Acknowledgment is made here to these sources without subsequent mention.

The region between The Pas and Churchill is of interest for a variety of reasons. It is easily accessible. There are a number of subarctic and arctic species. There are good living accommodations.

The Pas is served by highway 10 which continues north another 100 miles to Flin Flon. Where land has not been cleared for agricultural purposes, it is a black spruce and muskeg area, much like northern Maine, dotted with lakes. Some of the indiginous species are *Colias gigantea, Boloria eunomia, Papilio machaon, Erebia* species, *Oeneis jutta* and *macouni, Coenonympha tullia,* etc., as well as species associated with more southern latitudes. It is a community of some 6000 with stores, motels, and a small museum. It is also the point of embarkation by rail to Churchill on the west coast of Hudson Bay. No roads go to Churchill, so one has to take the train from The Pas, or the plane from Winnipeg. In 1973, the round-trip fare, per person, was about $134.00 by air from Winnipeg and about $37.00 by rail from The Pas (coach).

If one possesses an adventurous spirit, then by all means take the train. Those of a more sedate mien are well advised to fly. The rail distance from The Pas to Churchill is 510 miles and requires about 22 hours in transit, as the train makes extended stops to unload freight and change crews at Thicket Portage, Thompson, and Gillam. At these stops, the train is literally invaded by the local indians, to whom a rail coach is tantamount to a movie matinee. This is not conducive to sleeping, as the Gillam stop occurs just after midnight. The train schedule is typically: leave The Pas 10:30 AM Mon., Wed., Fri.; leave Churchill 5:30 PM, Tues., Thurs., Sat. In either direction, the Gillam stop is at midnight.

It is also possible to drive from The Pas to Thompson and fly from there to Churchill, or board the train. This saves about 175 miles of train travel, but increases driving time. During the peak of the summer months, there are some flights, but not on a daily basis, from The Pas to Churchill.

Churchill is actually a dual community of Churchill and Ft. Churchill. The two are about 3 miles apart and the overall population is just over 3000. There are several "motels" and hotels as well as stores in Churchill proper. My wife and I stayed at the Whaler's Co-op "motel" which has comfortable housekeeping units and makes very reasonable weekly rental

rates. It is located between the railroad and the Churchill River about 100 yards from the tundra. Thus right on the edge of prime collecting territory, which is between the railroad and the river from town to about 4 miles south at milepost 505 on the railroad.

Tent camping on the tundra is possible, and the Chermocks did so. They wrote an amusing account of some of their experiences. Because of the weather, which can turn miserable for days on end, and the mosquitoes and flies, this is not recommended. After spending a hot day of collecting and fighting the biting insects, it is a welcome relief to come back to a hot shower and a comfortable bed. During sieges of bad weather, temperatures hovering just above freezing are common. Incidentally to preserve one's sanity, a headnet is *essential* at Churchill, particularly after the sandfly hatch. Figure 2 illustrates some of the "friendly" creatures that inhabit the area and lust for the blood of visiting lepidopterists.

A rough map of the area is shown in Figure 3. The Subclimax Tundra area affords the best collecting for *Erebia rossii inornata* Leussler, *Boloria polaris* (Bdv.), and the endemic *Oeneis. O. jutta* is in the little stands of black spruce and tamarack. The remaining species are in open areas. The Taiga Zone south of milepost 507 on the railroad offers the best collecting for most of the remaining endemic species, although there is some exchange of species between the Taiga and Tundra Zones. When they first appear on the wing, *Colias nastes* and *hecla* can be found a mile or more into the Taiga, along the railroad right-of-way (cf. Masters, 1971, p. 8).

Although the Climax Tundra to the east and south of town, and north to Cape Merry is profusely covered with wildflowers, I found it for the most part, devoid of butterflies, at least until mid-July when we departed Churchill. Scenically it is a striking area of granite boulders, flowers, mosses, and lichens. An excellent view of the ice on Hudson Bay as well as Churchill Bay is afforded from this area. It is well worth a visit just for the panorama it provides. One small area just at the edge of town yielded *Erebia theano canadensis* Warren, *Colias nastes moina* Strecker, and *Plebejus aquilo lacustris* Freeman.

To cover the various habitats completely, about 8-10 miles of walking per day is necessary. This may be reduced, however, by using the local bus or taxis. In the early morning, I frequently took the bus to Dene Village and began collecting along the Ft. Churchill railroad spur to where it joins the main line. From

Fig. 2.—Photograph of some of the "friendly" creatures which add to the "joy" of arctic collecting. These are from Churchill, Manitoba. The head-to-tail length of the central fly is 2 cm.

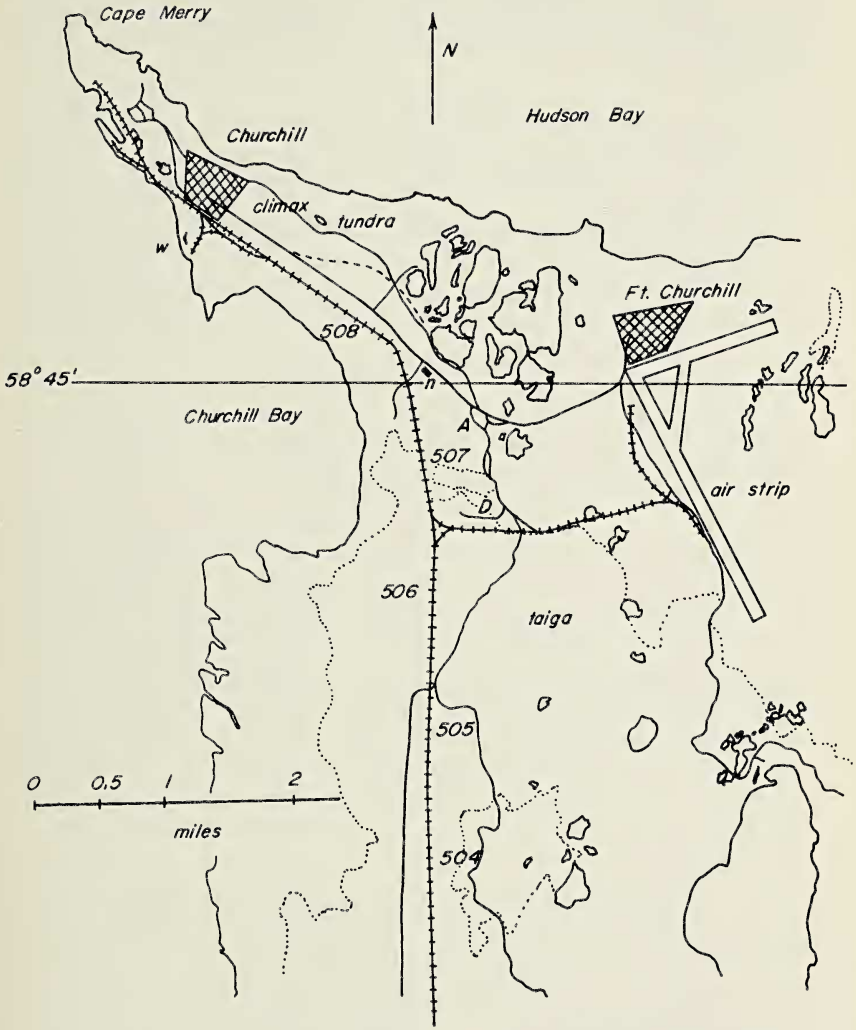

Fig. 3.—Map of Churchill, Manitoba area. W indicates the Beluga Sport Whaling Motel. A and D are respecively Akudlik and Dene villages. n indicates the old naval building. The numbers are mileposts along the railroad. The fine dotted lines represent the separation between the Tundra and Taiga Zones.

there, one can walk south along the tracks to mile 505 and then retrace steps and continue north across the tundra into town. The North Star Bus Lines, Ltd. provides regular service between Churchill and Ft. Churchill, with stops at Akudlik and Dene Villages.

Rental cars are available, but this is a waste of money. I believe in the philosophy ascribed to A. B. Klots, that is, if you are riding in a car, you can't be in the field collecting.

On warm mornings when the temperature is about 50°F, collecting begins at 9:00 AM; on cooler days, the bugs don't get out until about 10:00 AM. By 3:00 PM on cool days and 4:00 PM on warm days, collecting is over. This is quite different from interior Alaska, where I have collected from 7:00 AM until 9:00 PM. At Churchill, as long as there is full sun and the temperature is above freezing, butterflies will fly. I have collected in 35°F temperatures in mid-July. A warm day is when the temperature reaches 55-60°F.

Because of its interest to the collector and the accessibility of Churchill, a checklist is now provided including overall dates of flight. Seasonal variation is extreme so no attempt has been made to list peaking of flights. Masters (1971) made an honest attempt to do this, but when I collected in 1973, the species peaked much earlier than he indicated. Some years, however, are quite retarded. In 1973, the ice broke up in the vicinity of Churchill much earlier than normal and the Beluga whales returned three weeks ahead of schedule. In 1972-73 winter was exceptionally mild, after a cold and wet summer in 1972.

CHECKLIST — Churchill, Manitoba Butterflies

Hesperia manitoba borealis Lindsey	30-vi—3-vii	L	
(Biennial on even years?)			
Pyrgus centaureae freija (Warren)	17-vi—14-vii	E	
Colias g. gigantea Strecker	25-vi—9-viii	M	
Colias hecla hela Strecker (rare)	11-15-vii	L	(Type Locality)
Colias nastes moina Strecker	26-vi—9-viii	L	(Type Locality)
Colias palaeno chippewa Edwards	24-vi—9-viii	M	
Pieris napi ssp.	16-vi—15-vii	E	
Glaucopsyche lygdamus ssp.	Several reports, no dates	E	
Lycaeides argyrognomon scudderii (Edwards)	no dates	L	
Plebejus aquilo lacustris Freeman	15-vii-73	L	
Plebejus optilete yukona (Holland)	9-14-vii-73	L	

Boloria eunomia triclaris (Hübner)	23-vi—9-viii	M	
Boloria f. freija (Thunberg)	10-vi—15-vii	E	
Boloria frigga saga (Staudinger)	17-vi—1-viii	E	
Boloria polaris (Boisduval)	20-vi—28-vii	E	(Biennial on odd years)
Boloria titania boisduvalii (Duponchel)	1-vii—9-viii	L	
Erebia disa mancinus Doubleday	9-vii-73	M	(1 pair — only record)
Erebia d. discoidalis (Kirby)	15-vi—10-vii	E	
Erebia rossii ornata Leussler	10-vi—16-vii	E	(Type Locality)
Erebia theano canadensis Warren	2-23-vii	L	(Type Locality)
Oeneis bore/taygete ssp. (??)	15-vi—16-vii	E	(See Text)
Oeneis jutta ssp.	20-vi—15-vii	E	
Oeneis melissa semplei Holland	12-vi—2-viii	E	
Oeneis p. polixenes (Fabricius)	12-vi—2-viii	E	

Casuals and Strays

Papilio glaucus canadensis Roth. & Jordan (1) G. S. Brooks collector*. 1940.

Colias eurytheme Boisduval G. S. Brooks collector, 1942. Ferris saw what appeared to be a female of this species in the Taiga Zone, July, 1973.

Pieris protodice ssp. Bdv. & LeC. (1) G. S. Brooks collector*, 1942.

Pieris rapae (L.) (1) J. H. Masters collector, 3-vii-70.

Boloria selene ssp. (1) A. B. Klots, *in litt.*

Cynthia cardui (L.) 30-vi—15-vii-73 C. D. Ferris collector (common). (Migrant)

Nymphalis antiopa (L.) (Stray)

Nymphalis m. milberti (Godart) (Stray)

Lycaena species (probably *dorcas* ssp.) (1) 3-vii-52 in R. D. Bird field notes, see Masters (1971).

E = species which appear early in flight season; M = species which appear in middle of flight season; L = species which appear late in flight season. Actual appearance dates vary from season-to-season. (1) = single specimen record.

*These specimens have apparently been lost or destroyed.

Boloria chariclea ssp. has been recorded from Churchill, but probably has been confused with *titania*. At one time, the two taxa were considered conspecific by some authorities, and I believe that this has caused some of the nomenclatorial confusion in the Churchill records. Out of a lot of well over 100 specimens of *titania* which I took in 1973, four could be assigned to *chariclea* based upon facies. I choose to consider these as pale *titania*. A similar confusion zone between *titania* and *chariclea* exists in several parts of Alaska.

Masters (1971) asserts that two subspecies of *Oeneis jutta* occur at Churchill. *O. j. alaskensis* Holland, he claims flies on even numbered years, and *O. j. ridingiana* Chermock & Chermock flies on odd numbered years. This situation needs more study, as there is an unpublished Chermock name relating to the Churchill population of *jutta*.

A strange situation exists with *Oeneis bore/taygete.* This has been reported by various collectors as occurring at Churchill. I took a small series of what I thought was this insect. The veins on the undersides of the hindwings are clearly outlined in gray as in *taygete.* The ground color of the wings dorsally is paler than normal *polixenes.* Genitalic examination has proved these specimens to be *polixenes.* I have received specimens from other collectors sent as *taygete,* which on genitalic examination are *polixenes.* It appears then that two phenotypes of *polixenes* fly at Churchill. I have yet to see *taygete* from Churchill, although it may occur there.

My collecting included two species not recorded at Churchill previously: *Erebia disa mancinus* and *Plebejus optilete yukona.* A pair of the *Erebia* was taken at about 1:15 PM (CDT) in full sun in a clearing (cf. Masters, 1972, p. 4) at mile 506.5 on the railroad right of way on 9-vii-73. *P. optilete yukona* was found throughout the Taiga Zone in moist areas. It and *Pyrgus centaureae freija* are probably quite common and widely distributed, but overlooked because they fly close to the ground and blend in color so well with the mossy ground cover. Both are erratic fliers.

I suspect that nearly all of the endemic species recorded from Churchill, except perhaps for *C. hecla,* are common in suitable habitat at appropriate times during the season. My pair of *E. disa* may have been introduced via the railroad from one of the colonies at Gillam or elsewhere. One resident species which now appears uncommon is *Erebia theano canadensis.* The Chermocks found it abundant in the early sixties, but J. A. Ebner's collector in Churchill failed to find it during three successive seasons in the mid-sixties. (*in litt.*). Masters found it in 1969-70. In 1973, I did not find it in any of the locales from which it had been reported in the past. I did find several colonies at other locations, but it is a very local species and is tied to a "micro-habitat." One of Chermock's collecting sites has been destroyed by an Eskimo village housing development. Other areas have been ditched for drainage purposes and this has altered habitat. *E. theano* is probably common in remote areas that collectors have not yet penetrated.

The Churchill area is undergoing considerable development. The Subclimax Tundra Zone especially is being reduced by housing and radio antenna installations. The area between the railroad and the Churchill River is still virgin except for the

extreme northern end where the Whaling Centre is located. Most of the town growth appears toward the east and south toward the high Climax Tundra Zone. Evident in 1973, was the construction of a new hospital and a government-financed housing development. In spite of the encroachments of "progress," Churchill remains a fascinating place to visit.

Mt. Albert, Gaspe Peninsula, Quebec:

Mt. Albert's attraction lies in several species which are recorded from the tundra tableland on its top. The tableland is oblong, quite extensive, and virtually without distinguishing features except for a boulder pile at the center. It is very easy to lose one's sense of orientation. *Oeneis taygete gaspeensis* dos Passos, *Oeneis polixenes* ssp., *Papilio brevicauda gaspeensis* McDunnough, *Hesperia manitoba borealis* Lindsey, and *Pyrgus centaureae freija* (Warren) are recorded as well as a record in the 1940's for *Oeneis chryxus* ssp. A number of other species are found at the base of the mountain along the Ste. Anne River.

Mt. Albert is reached by a cut-off road from Highway 6 just northwest of New Richmond, Quebec. A resort hotel is located along the road across the river from the mountain. In contrast to Mt. Katahdin in Maine, as yet there is no restriction to collecting.

Getting to the top of the mountain used to be somewhat of a problem, as legally, one was supposed to have a Canadian guide. This situation has changed recently and access to the mountain is relatively easy. Trail maps can be obtained by writing: Direction Generale des Parcs, Ministère du Tourisme, de la Chasse et de la Pêche, Edifice G, Cité parlementaire, Québec, Qué., Canada, G1A 1R3 and requesting the brochure "Sentiers de Randonnée Pédestre, Parc de la Gaspésie." The brochure is published in French. There is a campground close to the trailhead, or one may stay at the resort hotel. There are several routes to the top now. The "Plaque Malade" trail is an easy hike through the trees to the top, but is longer than the Mt. Albert Trail ("Sentier du Mont Albert").

The optimum collecting time is quite variable. L. Paul Grey (Enfield, Maine) has made a study and feels that the best time is probably between July 6 and July 17 (*in litt.*). *Oeneis taygete* appear to fly for a very short period each year. On the other hand, John Johnstone (Willowdale, Ont.), (*in litt.*) has stated that there are two flights of *taygete;* one in the latter part of June, and another in July. Clear weather is essential for col-

lecting on the top of Mt. Albert. Making the trip on an overcast day will prove fruitless, as the bugs just don't fly.

Another region of interest is Labrador-Newfoundland. The author has not collected in this area, and has been informed that, at present, access into the most desirable areas is restricted because of mining interests. Richard Holland (1969) has described some collecting in this locality and mentioned the concomittant problems.

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The author wishes to express his appreciation to various individuals who provided him with general information on arctic collecting, and specific information on collecting areas prior to trips to northern locales. Included are James A. Ebner (Okauchee, Wisc.) and Dr. Kenelm W. Philip (Fairbanks, Alaska). The author, his wife, and Paul Grey spent a delightful and amusing several days at Mt. Albert in 1968, and mulled over the quixotic behavior of *O. taygete*.

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